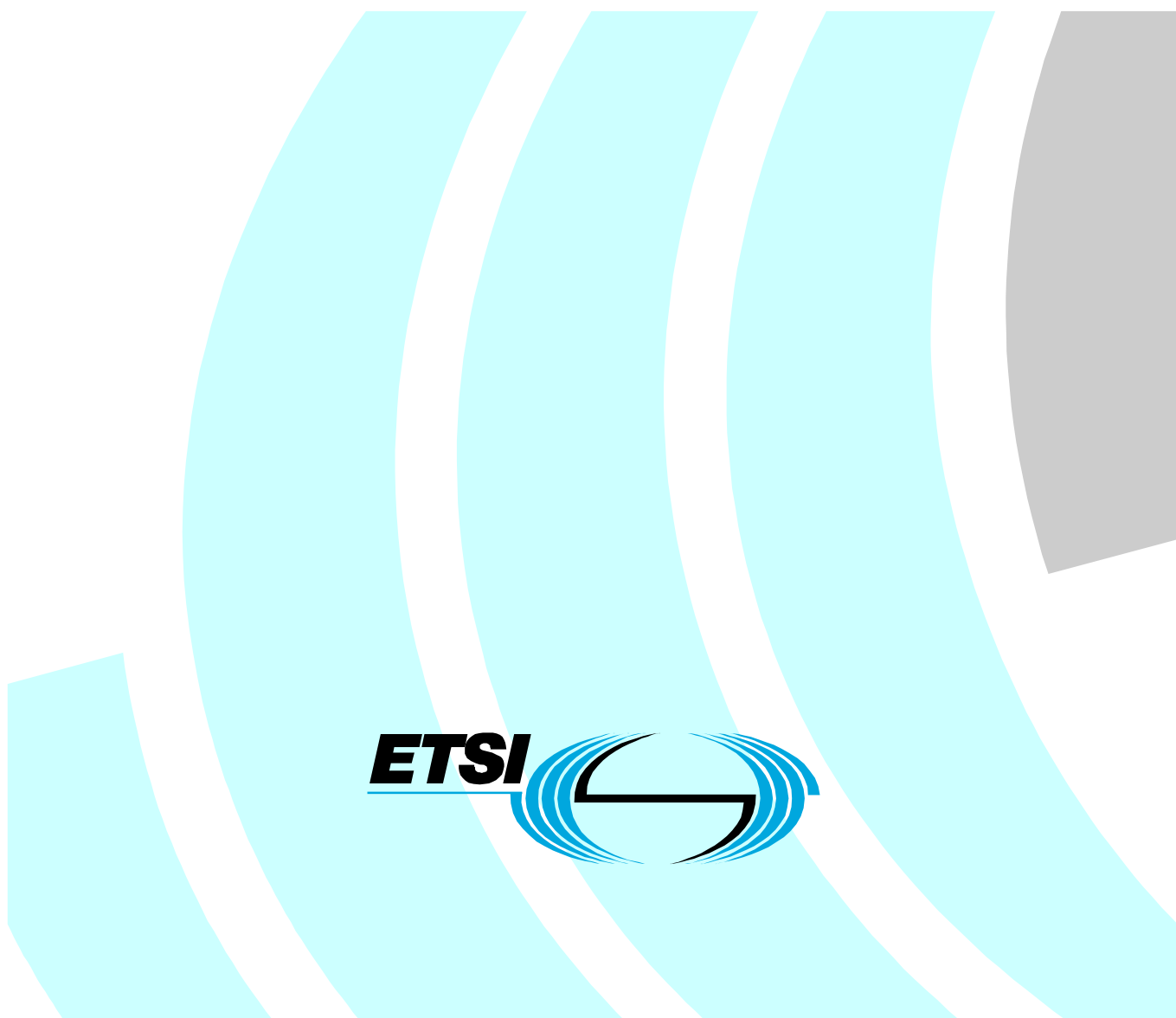


Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN); MGC Information Package



Reference

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Foreword

This Technical Specification (TS) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

1 Scope

The present document describes an extension to ITU-T Recommendation H.248.1 [1] gateway protocol to enable a Call Agent/MGC to store data on a MG that can be subsequently retrieved to facilitate MGC recovery action.

The standard H248 audit mechanism permits a MGC to retrieve data from an associated MG in order to re-synchronize connection data/state between a MGC and MG. In terms of identifying the other end of this connection, the SDP RD (Remote Descriptor) that is associated with the ephemeral termination enables the other end of the connection to be identified – albeit not in a format that may be convenient for the MGC to use. In many cases the RD may not enable the other end to be identified (e.g. some GWs may use different control and media addresses).

In order to achieve a co-ordinated recovery action, whereby both GW connections in a single call/end-end connection can be torn down in parallel, it is proposed to define a new H248 package to enable the MGC to store a block of data on a MG which enables the MGC to identify the other end of the connection. The structure of the stored data is understood only by the MGC and is opaque to the MG. Thus, the MGC is now able, via standard H248 audit mechanisms, to retrieve the previously stored data block in the event of a MGC failure. The MGC is now able to identify the other end of the connection (e.g. typically on separate MG) and thus provide a co-ordinated clean-up of the related connections on the separate MGs. The MGC is at liberty to define the contents of the string in a proprietary manner that is most convenient for its own usage.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

- [1] ITU-T Recommendation H.248.1: "Gateway Control Protocol: Version 2".

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

AGW	Access GateWay
CIC	Call Identification Code
GW	GateWay
ISUP	ISDN User Part
LCD	Local Control Descriptor
MG	Media Gateway
MGC	Media Gateway Controller
REL	RELease message
SDP	Session Description Protocol
SS7	Signalling System No. 7
TGW	Trunk GateWay

4 MGC information package

PackageID:	MGCInfo (0xTBA).
Version:	1.
Description:	This package enables the MGC to store an opaque data block against a physical or ephemeral termination in the MG.
Extends:	None.

4.1 Properties

Data Block

PropertyID:	db (0x0001).
Description:	This property holds the MGC Recovery Information data block.
Type:	Octet String.
Possible Values:	A range of 0 to 128 characters. The range can be modified in the appropriate H248 profile which defines the application which utilizes this property.
Defined In:	Local Control.
Default Value:	An empty string.
Characteristics:	Read/Write.

4.2 Events

None.

4.3 Signals

None.

4.4 Statistics

None.

4.5 Procedures

4.5.1 Setting the property

The property is set by the MGC when a termination (either physical or ephemeral) is placed into a non-null context.

Having been initially set, it is permissible for the MGC to subsequently modify the property by overwriting the previous setting.

4.5.2 Resetting the property

The property is reset to its default value when a physical termination is moved into the null context. For ephemeral terminations, the property shall be set to the default value when the ephemeral is created and no string has been supplied by the MGC.

4.5.3 Retrieving the property

The property is retrieved by the MGC in the event of an MGC failure. The retrieval is performed via the H248 audit mechanism. The property is part of the Local Control Descriptor (LCD) and is thus retrieved using the AuditValue command that specifies a specific termination id and theMedia Descriptor (which contains the LCD).

4.5.4 Example scenario

Consider a stable call/connection between a TGW and an AGW – both GWs being under the control of a single MGC. During the supervision phase, the MGC suffers a failure/disturbance and loses its transient memory.

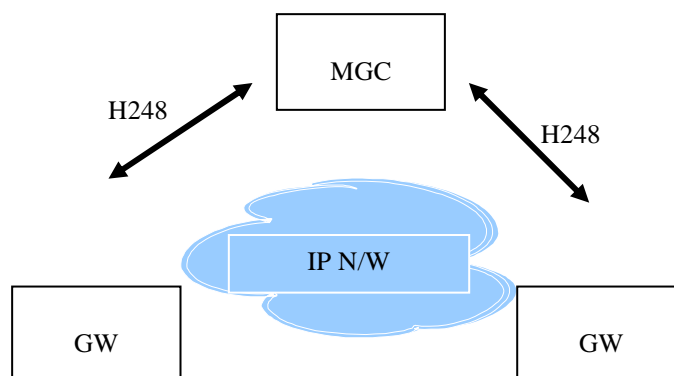


Figure 1: Example of scenario where GWs are controlled by MGC

As part of its normal recovery action, the MGC would typically perform H248 audits on its GWs to re-synchronize its lost data. This is typically done as a background activity. In addition, call signalling messages will also be received which will also initiate H248 audit activity. Consider that an ISUP-REL is received for the active call. The MGC will now :

- 1) Translate the SS7 CIC identity to corresponding TGW and endpoint identity.
- 2) The H248 audit mechanism enables the MGC to determine that the endpoint is connected (in a non-null context) and also the related ephemeral endpoint identity.
- 3) In terms of identifying the other end of this connection, the MGC also retrieves the MGC information string (that was previously stored when the connection was established). The string may be stored/retrieved via either a physical or ephemeral termination.
- 4) The MGC is now able to interpret the previously stored string as identifying the associated AGW termination. As a result the call may be torn down in a co-ordinated manner dealing with both GWs concerned. The MGC information string thus permits a faster and better co-ordinated recovery by the MGC.

This approach can be extended to any number of terminations within a context – e.g. each termination within a 3-way connection/context may each be provided with a separate MGC Information string.

History

Document history		
V1.1.1	June 2005	Publication